
ENVIRONMENTAL Fact Sheet



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2008

Best Management Practices for Fueling and Maintenance of Excavation and Earthmoving Equipment

Env-Wq 401, Best Management Practices for Groundwater Protection (formerly Env-Ws 421), apply to a variety of businesses and activities considered potential contamination sources under the Groundwater Protection Act, RSA 485-C. If you operate a *permanent* facility for fueling or maintenance of excavation or earthmoving equipment (or other vehicles), consult DES fact sheet WD-DWGB-22-4, Best Management Practices for Groundwater Protection. **If you fuel or maintain excavation or earthmoving equipment *in the field*, this fact sheet explains how to meet the requirements of the best management practices rules. The BMP rules apply to containers holding regulated substances as listed in 40 CFR 302, which include motor fuels, lubricants, hydraulic fluids, other petroleum products, degreasers, and other substances which are capable of contaminating drinking water.** The rules do not apply to containers smaller than five gallons, but it is prudent to follow the same practices outlined here.

1. Store fuels and fluids in sealed, clearly labeled containers.

Containers must be closed and sealed at all times, except to add or remove fluids.

2. Keep containers on a stable, impervious surface.

Containers must be stored in such a way that they will not easily tip over. Fueling, storage, and maintenance areas (areas where transfers of materials or work on equipment or vehicles might result in spills) must be level and located where there are concrete pads or at least 12 inches of compacted till or topsoil. This is to ensure that any spills will be absorbed by the soil near the surface *so that they can be cleaned up immediately*. Metal containers must be stored on pallets or otherwise prevented from coming in contact with moist earth.

3. Provide secondary containment.

- If any tank used for petroleum products (other than heating oil) has a capacity greater than 660 gallons or if the combined volume of petroleum products tanks on a site is greater than 1,320 gallons, the site must register with DES and meet the requirements of Env-Wm 1402 (for more information, call 271-3644).
- Regardless of size, any tank used to store petroleum products must comply with National Fire Protection Association standards 30 and 30A, which include requirements for secondary containment. To form a secondary containment basin, the area can be graded and bermed, lined with a continuous sheet of 10-mil high-density polyethylene (HDPE), and backfilled with at least 6 inches of sand. An alternative to the HDPE liner and sand is

a 12-inch layer of compacted silty or clayey fill material (providing an infiltration rate less than 10⁻⁴ cm/sec). The secondary containment area must have a roof to keep it free of rain, snow, and ice or the water that collects must be periodically removed to ensure sufficient containment volume remains to contain a release from the largest tank. (If the water has a visible sheen, DES must be contacted at (603) 271-3644 before the water is disposed of.) The secondary containment area must be sized to contain the volume of the largest tank. It may be used to store a fuel tank and/or other containers.

Depending on the size of the containers, any or all of several standards may apply:

- NFPA standard 30, which applies to all tanks, specifies such things as sizes and fabrication standards for containers, limits on the amount of materials that can be stored in any one pile or rack, distances between piles or racks, property line setbacks, and accessibility.
- Any fuel (other than heating oil) container larger than 60 gallons must meet UL standard 142.
- Construction, installation, or use of a tank larger than 660 gallons for storage of petroleum products requires DES approval.

4. Keep containers covered.

Containers must be covered with a roof, plastic sheeting, or waterproof tarpaulins to keep containers dry, except when materials are being added or removed.

5. Keep storage areas secure.

Storage areas must be kept secure. Employ a locked gate at the entrance to the site, a fence and a locked gate around the storage area, and/or store regulated substances in a locked trailer or shed. Access to storage areas must be under lock whenever the site is unattended. If the site is inactive for a period, the storage area must be inspected weekly for leaks and security. To keep storage areas secure from collision damage, berms or boulders should be used and the storage area should be located away from the active portion of the site.

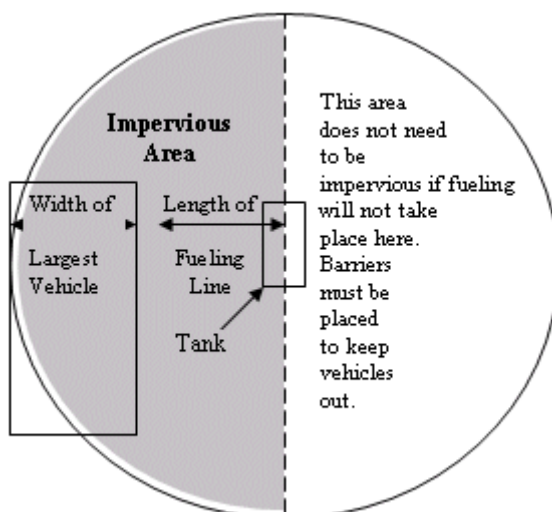
6. Keep containers away from surface waters and public water supply wells.

Containers must be kept at least 50 feet from catch basins and surface waters, 75 feet from private wells, and outside the sanitary radius (varies from 150 to 400 feet) of a public well.

7. Use drip pans under spigots, valves and pumps to catch leaks and spills.

8. Prevent spills when fueling vehicles or transferring fluids from one container to another.

Use funnels and drip pans wherever possible. Perform fueling over impervious, level surfaces. If the facility is subject to Env-Wm 1402 (see item 3 above), the impervious surface must be concrete. If the site is not subject to Env-Wm 1402, the impervious surface can be HDPE and



sand or compacted soil as described above. The impervious surface must be large enough to fully contain the fueling operation. (This encompasses the area where the fueling hose is capable of reaching plus the width of the largest vehicle to be fueled – see illustration on this page). Note that while fuel tanks attached to vehicles are exempt from the storage requirements of the BMP rules, the fueling operation is not exempt.

9. Train employees to prevent, contain, and clean up spills.

Train employees in all aspects of proper storage and handling of hazardous substances. Instruct employees to *immediately* clean up spills and contaminated soil. Post spill response information at all storage areas (poster available from DES).

10. Properly store and dispose of contaminated soil and materials.

Store small quantities of contaminated soil and sorbent materials in covered containers. Do not mix sorbents contaminated with different regulated substances. This can create a hazardous waste that requires disposal by a licensed hauler. For proper disposal, contact the DES Solid Waste Compliance Section at (603) 271-2925.

11. Immediately report significant or uncontrolled spills.

Small spills that are quickly cleaned up do not need to be reported. However, if *any* of the following occurs, the spill must be immediately reported to the N.H. Department of Environmental Services at (603) 271-3644:

- The spill is not contained immediately.
- The spill and contamination are not completely removed within 24 hours.
- There is impact or potential impact to groundwater or surface water.
- The spill is 25 gallons or more.

Waivers

While the BMP rules are intended to apply to a variety of circumstances, DES recognizes that strict compliance may not fit every situation. Requests for specific waivers should be directed to DES at (603) 271-1168.

This fact sheet is a statement of DES's policy for interpreting Env-Wq 401, in terms of their applicability to fueling and maintenance of earthmoving and excavation equipment. Information contained in this fact sheet is current as of March 2008. Statutory or regulatory changes that may occur after this date may change this information. If there are any questions concerning the status of the information, please contact DES at (603) 271-2947.